



2005 NACo Achievement Award

Constructing a Regional GIS Database for First Responders

Montgomery County, Department of Technology Services

The Montgomery County, Department of Technology Services - Geographic Information Systems (DTS-GIS) team has successfully constructed a regional GIS database for supporting the needs of first responders within the public safety agencies in the County. Unlike many efforts around the country for constructing regional GIS databases, which for the most part are still in pilot stages, this regional database has been in operation since July 2003 and currently supports the daily operational needs of the public safety agencies. The databases have gone through multiple upgrades and are improving significantly as the maintenance programs are moving toward smooth operation.

Montgomery County Fire and Rescue Service (MCFRS) maintain standing Mutual Aid (MA) agreements with surrounding jurisdictions. These agreements provide fire and rescue services to residents of neighboring jurisdictions within a specific distance from the common borders. For counties with abutting less developed areas (Frederick County, Carroll County and Howard County), the distance is 5 miles. For more developed areas (with dense dwellings) along the border, the distance is 3 miles. This applies to Prince George's County, the District of Columbia and Virginia's Fairfax County. If requested, these jurisdictions will also render help to Montgomery County residents within 3 or 5 miles of the County border.

To support the mutual aid requirement on the County's new computer aided dispatching (CAD) system, the relevant GIS data layers needed to be expanded to include the MA areas in neighboring jurisdictions around Montgomery County.

Collecting and integrating needed GIS data layers from these neighboring jurisdictions had some challenges—both institutional and technical. Nevertheless, following the 9/11/2001 tragic event, there was an increased realization of the need for building a regional GIS database to support first responders and emergency response planners. The collegiate atmosphere among the GIS managers in the region also helped the collection effort.

The GIS data (street centerlines, buildings, hydrants, water sources, and critical facilities) from all of the neighboring jurisdictions were provided to the County free of charge. The existing GIS hardware and software were used for the integration and maintenance of the in- and out-of-county data layers; and for the conversion of GIS data to CAD (Computer Aided Dispatch) format files. Updated versions of the data layers were requested and are being received.

When needed, a true regional GIS database covering additional Virginia counties such as Arlington, Prince William and Loudon can be constructed to support the public safety needs of the National Capital Region. An earlier version of the regional centerline database supported the public safety agencies in the region for the October 2002 sniper cases investigation. An NCR GIS data interoperability project sponsored by the COG MetroCIO is underway.

Montgomery County's experience of constructing a regional GIS database for supporting the County's first responders represents one of the first such endeavors, thus far, in the nation. The experience gained can serve as a model for other similar initiatives.